UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,100	10/31/2001	Thomas D. Hanan	K35A0989	9371

			EXAMINER
26332	7590	11/10/2005	ANDERSON, MATTHEW D

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ART UNIT	PAPER NUMBER
2186	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/004,100	HANAN, THOMAS D.
	Examiner	Art Unit	
	Matthew D. Anderson	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>04 November 2005</u>.
2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
      closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-24</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-24</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>04 November 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>7/25/05</u>.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings were received on 11/4/05. These drawings are approved.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-8, 10-17, 22, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by

Hamlin (US Patent # 6,772,281).

4.   For claims 1 and 12, Hamlin teaches a disk drive (col. 2, lines 66 67), comprising: ("A

method for accessing storage locations of a disk storage medium in a disk drive" (col. 3, lines 56

60) "using a disk controller" (col.4, lines 47 48), as stated in claim 12)

A ("the..." as stated in claim 12) disk, storage medium (see Fig. 1, feature 110) having a

first range of disk drive host interface addressable locations accessible by a host computer

operating system (col. 3, lines 1 3), at least one of the addressable locations being used to

designate a mailbox; file (col. 3, lines 32 33) {(where the mailbox file was defined as" .... a

functional file contained on the storage medium of a hard disk drive, the file being executable

under control of the hard disk drive" refer to paragraph [0018] lines 3 5 of the specification) both

embodiments described, in regards to the first data block, in the lines provided fit within the

limitation of a 'mailbox file' as described here in claims 1 and 12}; and a disk controller (see Fig.

1, feature 124) for responding to a command from the host computer operating system that

references the mailbox file (col. 3, lines 1 5) to perform a function characterized by contents of

the mailbox file. In the reference, the disk controller satisfies the request of the host computer,

which references the first valid data block stored in a first block storage location on the disk. (In

regards to claim 12, "...the method comprising the steps of: recognizing a command from the

host computer operating system (col. 3, lines 1 5) as a reference to the mailbox file (col.3, lines

11 13); and responding to the command by performing a function characterized by contents of

the mailbox file (col.5, lines 54 57)", where the predetermined storage location on the disk

contains the mailbox file which can store data representing audio/video information to be

displayed on the host monitor once called to do so by the request of the host computer operating

system).

With respect to independent claims 1 and 12, Hamlin teaches a mailbox file being

executable under control of the disk drive by teaching in column 5, lines 43-50, that the disk

drive can be configured to recognize when the boot sector is being addressed by the host, and in

response thereto, can substitute a different address whereby alternate executable code can be

booted. Therefore, the code is executed under control of the disk drive.

With respect to independent claims 1 and 12, Hamlin teaches a disk controller performing

a function characterized by contents of the mailbox file, by teaching in column 5, lines 39-42,

that upon execution of the boot sector code, the disk drive reads other code from the disk media

to initiate a layered process of moving the operating system code. In other words, this executing

of the boot code causes other code to be read *from the disk* is the function characterized by the

boot code.

5.   For claims 2 and 13, Hamlin teaches a disk drive (col. 2, lines 66 67) according to claim

1, ("A method according to claim 12", as stated in claim 13), wherein the mailbox file is located

in at least one of the disk storage medium (see references above), and a computer memory

associated with the disk controller (col.4, lines 23 25).

6.   For claim 3, Hamlin teaches a disk drive (col. 2, lines 66 67) according to claim 1,

wherein the first range of disk drive host interface addressable locations is in a first space (col. 3,

lines 2 3) directly accessible by the host computer operating system (col.3, lines 57 60).

7.   For claims 4 and 14, Hamlin teaches a disk drive (col. 2, lines 66 67) according to claim

1, wherein the function is used to access a second range of addressable locations that are not disk

drive host interface addressable and that are contained on the disk storage medium (col. 4, lines 5

9), where the control means satisfies the request for the first data block by accessing a second

data block at a second storage location on the disk.

8.   For claims 5, 8 and 17, Hamlin teaches a disk drive according to claim 4, €("a disk drive

according to claim 1" as stated by claim 8) and ("a method according to claim 16" as stated by

claim 17)} (col. 2, lines 66 X67), wherein information is written to the second range of

addressable locations in an encrypted format (col. 6, lines 52 55) where the information

referenced to can be written to the disk in a protected mode to any specified location desired on

the disk which can be the second range of locations. (".... Information is written in an encrypted

format to the second range of addressable locations" as stated in claim 17 (col. 6, lines 52 55).

9.   For claims 6 and 15, Hamlin teaches a disk drive according to claim 4 (col. 2, lines 66

67), wherein the disk controller (see Fig. 1, feature 124) uses a command block contained in the

mailbox file for accessing the second range of addressable locations (col. 5, lines 28 30, 37 38,

44 48). In this embodiment of the reference, the control means serves as the command block and

the first valid data block, which contains the mailbox file (see 102 discussion of claims 1 and 12

above) serves as a boot sector that governs the behavior of the overall system. Since the

command block is used for accessing the second range of locations it can easily be shown that

the disk controller uses the control means as a command block all of which is contained in the

mailbox file described here as a boot sector. The second range of addressable locations occurs

when the disk drive recognizes that a boot sector is being addressed by the host and in turn

substitutes a second range of addressable locations described here as a different address.

10.   For claims 7 and 16, Hamlin teaches a disk drive according to claim 6 (col. 2, lines 66

67), ("A method according to claim 15 ...." as stated by claim 16; see references cited above for

claim 12 in regards to the method), wherein the command block is stored in an encrypted format

in the mailbox file (col. 6, lines 28 33 & col. 5, lines 37 38)) where the commands issued by the

host are implemented in the control means which serves as the command block. The reference

also indicates that the commands can be protected commands and since the first valid data block

that contains the mailbox file is described as the boot sector, which governs the behavior of the

overall system it can be shown that the references cited read on the command block being in an

encrypted format in the mailbox file.

11.   For claim 20, Hamlin describes relocating information (e.g. executable code) from the

secondary or alternate address location to the first set of addressable locations described here as

the boot sector (col. 5, lines 44 47).

12.   For claim 24, Hamlin teaches using a command validation key associated with the

mailbox file to at least one of validate and reject the command, as shown by the code comparison

in step 228.

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

14.   Claim 9 is rejected under 35 U.S.C. 103 (a) being unpatentable over Hamlin as applied to

claim 1, previously mentioned, and further in view of Grawrock (US Patent # 6,360,322).

15.   Hamlin differs from the claimed invention in that it fails to specify the transfer of a key

from the mailbox file, instead referencing that " .... information retrieved from the disk ...can be

transferred to the host..." (col. 5, lines 1 6). Grawrock teaches a function similar to that of

Hamlin's in that information is being transferred is referred to as an OTP computer program code

(col. 6, lines 28 31 & 33 35).

16.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to have formed the device of Hamlin with an OTP (one-time) program code of

Grawrock, which is described as either a public or private key. The OTP program code described

here refers to the OT public/private key. We are only concerned with the public key since it is stored on the computer system (col. 5, lines 32-33). It (OTP) is described as being stored on a disk in a location. This particular location on the disk, once activated by the host computer, transfers the information for the public key. This reads on the claim of the mailbox file being stored on a location on the disk medium a function being used to transfer a key from such a file.

17.   Claims 18-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin in view of Olsen (U.S. Patent 6,901,481) as applied to claim 12 above.

18.   Hamlin differs from the claimed invention in that it fails to specify using a file system of an application program to access the second range of addressable locations. It references the request coming from the host referencing the "boot sector .... and substituting a different address.." where the boot sector described refers to the mailbox file and the different address refers to the second range of addressable locations. Olsen teaches on an application program that sends a write request to the disk storage (col. 8, lines 4 6) where the second range of locations described here as the persistent volatile memory (col. 7, lines 1 4) is accessed by the operating system.

19.   It would have obvious to one of ordinary skill in the art at the time the invention was made to have formed the method of Hamlin with the application program of Olsen, since Olsen teaches the application program having a file system (e.g. verifying and updating files col. 7, lines 53 55) in the same field of endeavor (accessing a second range of addressable locations thru use of a program).

20. For claim 19, Hamlin describes information being written to the disk in a protected mode (col. 6, lines 52 53). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of Olsen where an application program writes information to the disk (col. 7, lines 60 63) so that the application program is the medium that writes the information to the disk in a protected format.

21. For claim 21, Hamlin teaches on the transfer of information between the first set of addressable locations and the second set of addressable locations (see item 16 above). Olsen teaches the write of information to the first set of addressable locations from the operating system. Once this is done the operating system sends a confirmation that the transfer is complete to the application program (col. 8, lines 6 10). It would have been obvious to combine the confirmation of data (or information) transfer in the mailbox file where the reference above in item 16 describes the first storage location as the "boot sector" which governs the operation of the overall system (col. 5, lines 37 38).

22. For claim 23, Hamlin teaches wherein the information is stored on the disk drive and transferred between the disk drive and the application program in an encrypted form, by teaching that "Any or all of the information stored in the memory device can be stored in any other memory device of the disk drive ...." (col. 4, lines 33 34 Hamlin). This can include a memory device configured as an EPROM, ROM, RAM etc. (col. 4, lines 23 25 Hamlin) which is in the control means which is located in the disk drive (Fig.1 Hamlin). Information that is also stored in memory (non volatile) RAM is transferred between disk drive and application program in an encrypted format (col. 2, lines 34 39 Olsen). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of

Olsen where an application program writes information to the disk (col. 7, lines 60 63) so that

the application program is the medium that writes the information to the disk in a protected

format.

Conclusion

23.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

24.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Matthew D. Anderson whose telephone number is (571) 272-

4177. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew D. Anderson
Primary Examiner
Art Unit 2186

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FIG. 1